

CLAIMS

1. A liquid ejection head comprising:

a liquid path;

5 an ejection outlet forming member which constitutes a part of a wall of the liquid and which forms an ejection outlet for ejecting a droplet of liquid;

a heat generating element, provided at a position opposing to said ejection outlet of the wall of said liquid flow path, for generating a bubble in the liquid by application of heat to the liquid;

10 a restrictor portion, provided at a recessed portion of said ejection outlet, wherein said recessed portion is recessed from a plane in which said ejection outlet is formed, wherein the liquid forms a meniscus and is retained in said ejection outlet such that said restrictor portion is within the liquid,

15 wherein an area  $S_o$  of an opening of said restrictor portion and a surface  $S_h$  of said heat generating element satisfy  $S_o \leq S_h$ .

2. A liquid ejection head comprising:

a liquid path;

25 an ejection outlet forming member which constitutes a part of a wall of the liquid and which forms an ejection outlet for ejecting a droplet of

liquid;

an energy generating element, provided at a position opposing to said ejection outlet of the wall of said liquid flow path, for generating ejection  
5 energy to be applied to the liquid;

a restrictor portion, provided at a recessed portion of said ejection outlet, wherein said recessed portion is recessed from a plane in which said ejection outlet is formed, wherein the liquid forms a  
10 meniscus and is retained in said ejection outlet such that said restrictor portion is within the liquid,

wherein a thickness  $c$  of said restrictor portion and a height  $e$  of said liquid path measured in a direction in which said ejection outlet and said  
15 energy generating element are faced to each other, satisfy  $c \leq e$ .

3. A liquid ejection head according to Claim 2, wherein said energy generating element is a heat  
20 generating element.

4. A liquid ejection head according to Claim 2, wherein an area  $S_o$  of an opening of said restrictor portion and a surface  $S_h$  of said heat generating  
25 element satisfy  $S_o \leq S_h$ .

5. A liquid ejection head comprising:

a liquid path;

an ejection outlet forming member which constitutes a part of a wall of the liquid and which forms an ejection outlet for ejecting a droplet of liquid;

an energy generating element, provided at a position opposing to said ejection outlet of the wall of said liquid flow path, for generating ejection energy to be applied to the liquid;

a restrictor portion, provided at a recessed portion of said ejection outlet, wherein said recessed portion is recessed from a plane in which said ejection outlet is formed, wherein the liquid forms a meniscus and is retained in said ejection outlet such that said restrictor portion is within the liquid,

wherein a thickness  $c$  of said restrictor portion and a

thickness  $d$  of said ejection outlet forming member measured between a plane in which said ejection outlet is formed and said restrictor portion, satisfy  $c \leq d$ .

6. A liquid ejection head according to Claim 1, 2 or 5, wherein said restrictor portion is disposed in a middle in a direction of a thickness of said ejection outlet forming member.

7. A liquid ejection head according to Claim 1, 2 or 5, wherein a diameter of the opening of said restrictor portion changes along a direction of ejection of the liquid through said ejection outlet.

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8. A liquid ejection head according to Claim 1, 2 or 5, wherein said restrictor portion has the opening including a plurality of fine bores.

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9. A liquid ejection head according to Claim 1, 2 or 5, wherein the liquid is recording liquid usable with ink jet recording.

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10. A liquid ejection head according to Claim 1, 2 or 5, wherein the liquid is medicine to be inhaled into a lung.

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11. A liquid ejection head according to Claim 5, wherein an area  $S_o$  of an opening of said restrictor portion and a surface  $S_h$  of said heat generating element satisfy  $S_o \leq S_h$ .

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12. A liquid ejection head according to Claim 5 or 11, wherein a height  $e$  of said liquid path measured in a direction in which said ejection outlet and said energy generating element are faced to each other, satisfy  $c \leq e$ .